NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

CRITICAL AREA PLANTING

(Ac.)

CODE 342

DEFINITION

Establishing permanent vegetation on sites that have or are expected to have high erosion rates, and on sites that have physical, chemical or biological conditions that prevent the establishment of vegetation with normal practices.

PURPOSE

- Stabilize areas with existing or expected high rates of soil erosion by water.
- Stabilize areas with existing or expected high rates of soil erosion by wind.
- Restore degraded sites that cannot be stabilized through normal methods.

CONDITIONS WHERE PRACTICE APPLIES

On areas with existing or expected high rates of erosion or degraded sites that usually cannot be stabilized by ordinary conservation treatment and/or management, and if left untreated, could be severely damaged by erosion or sedimentation or could cause significant off-site damage.

CRITERIA

General Criteria Applicable To All Purposes

Species selected for seeding or planting shall be suited to current site conditions and intended uses. Selected species will have the capacity to achieve adequate density and vigor within an appropriate time frame to stabilize the site sufficiently to permit suited uses with ordinary management activities.

Species, rates of seeding or planting, minimum quality of planting stock, such as PLS or stem caliper, and method of establishment shall be specified before application. Only viable, high quality seed or planting stock will be used. Species will be listed in the Range Seeding standard or in the attached specification. The pure live seeding rate (PLS) is 40 plants per square foot. The rate must consider purity and germination to achieve the PLS rate.

Native species will be used when their abilities to protect the soil are similar to non-natives. Introduced species may be preferred when it is deemed they will stabilize the site better.

Annuals will only be used to create a cover crop or dead litter crop to temporally stabilize an area long enough to plant a perennial cover.

Site preparation and seeding or planting shall be done at a time and in a manner that best ensures survival and growth of the selected species. The timing of the plantings will use the zones and the planting dates listed in the Range Seeding standard. A successful perennial planting will have an average of ½ plant per square foot after one year of planting.

Fertilization or other facilitating practices for plant growth shall be timed and applied to accelerate establishment of selected species. If the site is to be fertilized a soil test will be taken. All plant nutrients will be applied using the Nutrient Management Practice Standard (590).

Plantings shall comply with all applicable federal, state, and local laws, rules, and regulations.

Additional Criteria To Restore Degraded Sites

If gullies or deep rills are present, they will be treated (amended), if feasible, to allow equipment operation and ensure proper site and seedbed preparation.

Soil amendments will be added as necessary to improve or eliminate physical or chemical conditions that inhibit plant establishment and growth. Required amendments, such as compost or manure to add organic matter and improve soil structure and water holding capacity; or elemental sulfur or gypsum to lower the pH of calcareous soils shall be included in the site specification with amounts, timing, and method of application. Use the NM 590 Nutrient Mgt. Standard and a Sodium Adsorption Ratio test to determine if Sodium is a problem.

Additional Criteria for Mulching

If there is a potential for erosion to occur before the planting can establish, apply mulch to temporarily protect the soil until the planting can establish. See the Mulching practice standard (484).

Additional Criteria for Shaping

Some shaping of critical areas may be required, either to allow for the special management that may be required, or to make the area conform to the surrounding area. Shaping is required when the critical areas are headcuts, bankcuts, ephemeral or classical gullies, or other severely eroded natural areas.

CONSIDERATIONS

Avoid species that may harbor pests. Species diversity should be considered to avoid loss of function due to species-specific pests.

During planning, the changes in the vegetation which could effect water quality, such as volumes and rates of runoff, infiltration, evaporation, deep percolation, ground water recharge, organic matter, water holding capacity of the soil, and snow catch and melt all should be considered.

Water quality effects such as erosion and sediment movement, use of pesticides or nutrients, the filtering effect of vegetation, the potential for uncovering toxic materials during construction, and the short term construction-related damages also should be considered during the planning process.

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded and filed using the approved jobsheets or narrative statements in the conservation plan.

The NM Specification contains the appropriate information to design the practice. A jobsheet will be filled out and given to the client using the information included in the Standard and the Specification.

OPERATION AND MAINTENANCE

Use of the area shall be managed as long as necessary to stabilize the site and achieve the intended purpose.

Control or exclude pests that will interfere with the timely establishment of vegetation.

Inspections, reseeding or replanting, fertilization, and pest control may be needed to insure that this practice functions as intended throughout its expected life.